# ORIENTATION and MOBILITY for the VISUALLY IMPAIRED

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# *Introduction*

In its publication on Special Programs, the Division of Special Education within the Ministry of Education adopted the following position concerning the education of special needs children:

> The Division believes that each student, through acquisition of knowledge, essential skills, and positive attitudes, can develop into a self-actualizing, self-respecting individual capable of making a real contribution to the quality of human existence.[1]

In line with this position, the Ministry of Education recognized the need to provide orientation and mobility instruction for visually impaired students enrolled in public schools, and in October, 1980, established a provincial orientation and mobility instruction program.

Orientation and mobility is a relatively new discipline that has been defined in several ways. The Ministry of Education accepts the following definition, which combines the definitions of the key words — orientation and mobility — and underlines their interdependent and consecutive relationship:

> The process of using the remaining senses to establish one's position and relationship to all other significant objects in one's environment; the ability to move safely, confidently, and efficiently within one's environment.

Without the use of vision — a primary source of information gathering — visually impaired students are at a significant disadvantage. To compensate for loss of vision, these students must be able to move freely and safely within their environment in order to be within auditory and/or tactile range of sources of information. Orientation and mobility skills are essential to the development of this ability, increasing the likelihood that a variety of environments will be explored, and leading in turn to a broader, more substantial base of knowledge and information. More specifically, orientation and mobility skills are fundamental to the students' success in several key areas: social interaction, good posture and physical well-being, concept development, and the acquisition of first-hand information.

The position taken by the Ministry concerning the importance of orientation and mobility skills is outlined in the following statements:

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[1] Special Programs: A Manual of Policies, Procedures, and Guidelines (Rev. 1983) Section 3.3.

> Orientation and mobility are important independence skills for visually impaired students. The development of these skills is a shared responsibility of school and home.[2]

> Trained and qualified teachers should be employed for programs for visually impaired students in accordance with Schools Circular No. 58, dated August 29, 1978. Other personnel involved (e.g., orientation and mobility instructors, Braille transcribers) should have the training and competencies in the relative areas.[3]

In British Columbia, the integration of visually impaired students in regular school programs is widely accepted. However, appropriate support is required at both school and district levels in order to ensure that visually impaired students can follow the regular curriculum with only minor adaptations, and can have increasing opportunity for specific skill building.

To assist these students, all school personnel and parents dealing with visually impaired students should have some knowledge of basic orientation and mobility techniques and an awareness of the student's mobility needs. Educational objectives will vary, according to individual strengths, cognitive skills, and severity of handicap(s). However, it is important that orientation and mobility skills are introduced as early as possible, and continue in a planned sequential pattern throughout the school years and into adulthood.

Each individual wishes to be independent. The acquisition of orientation and mobility skills on a sequential pattern lasting throughout a student's life will help make a high level of independence possible.

## *Student Eligibility*

Student need should determine eligibility for orientation and mobility instruction. However, for administrative purposes, certain criteria may be used by school district personnel. The criteria for eligibility are outlined as follows, in Schools Circular No. R59, dated September 14, 1980:

> The child must be in attendance, and be in the age range of 4.8 to 19.0 years, and must be legally blind, either registered with, or eligible for registration with, the Canadian National Institute for the Blind.

In addition to the above criteria, decisions to provide service should be based on observations and evaluations by specialist teachers of visually impaired students in the various school districts. Special consideration should be given as well to children whose degree of vision is difficult to determine, and who demonstrate a need for orientation and mobility services. Though these children may not be legally blind, their visual impairments can result in such substantial handicaps that they require special education services, including orientation and mobility.

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[2, 3] Special Programs: A Manual of Policies, Procedures and Guidelines (Rev. 1983), Section 11.29.

## *Service Delivery*

Traditionally, orientation and mobility instructors were employed by rehabilitation agencies such as the Canadian National Institute for the Blind, which served only the adult blind population, while special residential schools for blind children provided orientation and mobility instruction using their own trained staff. Within the past two decades, however, an increasing number of orientation and mobility instructors have been providing services to blind children and youth in both residential and public school settings.

In Canada, provinces have adopted various approaches to providing orientation and mobility instruction to school-age visually impaired children. Two provinces (Saskatchewan and Manitoba) have orientation and mobility instructors employed by provincial departments of education, while at least one (Alberta) provides this instruction on a fee-for-service basis, calling on orientation and mobility instructors as needed.

In British Columbia, between September, 1980 and March, 1984, the Ministry of Education funded a program through a contract with the Canadian National Institute for the Blind. Under this program, orientation and mobility instructors were employed by CNIB, but only served school-age visually impaired students. When there were not enough instructors available, instruction was provided on a fee-for-service basis.

In some parts of the United States, it is becoming more common for school districts to employ orientation and mobility instructors when the number of students warrants such appointments. These instructors are either trained to serve blind individuals in rehabilitation settings or in school programs. In the latter case, instructors may have teacher certification and may also have acquired dual competencies in both teaching and orientation and mobility instruction.

Regardless of the type of service model adopted, the development of an ongoing instructional plan is key to the success of the service provided. One means of formalizing such a plan is to construct an Individualized Service Plan (ISP) for each student, which should be developed through consultation with all members of a student's team.

An ISP is contractual in nature, outlining the responsibilities of each party involved, e.g., the orientation and mobility instructor, the specialist teacher, the regular class teacher, parents, other support personnel, and, whenever appropriate, the student. The ISP should include the intended objectives of the instruction, as well as the length of time expected to achieve the stated objectives (see sample ISP, Appendix B). An ISP can also be part of the Individual Education Program (IEP), that many school districts require for special education programming.

In summary, the following service models are being utilized in various parts of Canada and the United States:

- Orientation and mobility instructors are employed by departments of education.
- Contract-for-service is funded by departments of education through rehabilitation agencies.
- Fee-for-service is provided by individual orientation and mobility instructors.
- Orientation and mobility instructors are employed by school districts.

(For information concerning current service delivery for visually impaired students in the province, please refer to the Ministry of Information Circular No. 19, dated October 5, 1983, in Appendix A.)

## *Using This Resource Book*

This resource book has been designed to provide an overview for school district personnel, administrators, teachers, and parents. It is not intended as a manual for instruction; rather its purpose is fourfold: to provide basic information concerning orientation and mobility instruction and related services; to describe the active supporting role required of school personnel and parents in the task of helping visually impaired students; to outline critical skills for students at various grade levels; and to suggest a process for developing programs for individual students, including basic instructional techniques.

A glossary of selected terms specific to orientation and mobility is also included for individuals working with visually impaired students. Readers should note that the glossary contains several terms commonplace to the sighted (e.g., alley/back lane, boulevard), but having specific characteristics that need to be differentiated for the individual who is visually impaired.

The resource book is divided into five parts:

- "Roles and Responsibilities" outlines the responsibilities of educational agencies and personnel, parents, and visually impaired students, giving specific, point-form instructions and suggestions to each of eleven groups that make up the student's support system.
- "The Visually Impaired Student" follows the student from preschool to secondary school, emphasizing the importance of planned, sequential orientation and mobility instruction from early childhood to adulthood. Specific suggestions are given to caregivers and to school personnel for each stage in this ongoing process. The needs of the multi-handicapped are also discussed.
- "Basic Orientation and Mobility Techniques" outlines a number of techniques designed to help the reader intervene more knowledgeably on behalf of the visually impaired student. The section offers practical guidelines to basic techniques used every day in common situations.

- "Programming for Instruction" offers a model orientation and mobility program specifically designed for the teacher in consultation with parents and personnel involved.

- "Orientation and Mobility in Various Environments" outlines the techniques used daily in a variety of situations and environments, from home and neighborhood to camping trips in the country. Specific suggestions are made for orientation and mobility in each of five situations and/or locations.

Two additional resource books concerning the visually impaired are also available: *Physical Education for the Visually Impaired*, and *The Visually Impaired Student in the Regular Classroom*. Readers are referred as well to a half-hour videotape, "The Integration of Visually Impaired Students in the Regular Classroom" developed by the Provincial Media Centre as part of their *Chalk Talk* series. This tape offers an excellent demonstration of a number of the orientation and mobility techniques discussed in this resource book.

To succeed, orientation and mobility instruction will need to be directed by trained instructors who have solid expertise in orientation and mobility, the education of the visually impaired, and child growth and development. But with the support of concerned individuals, this instruction can be given in the home, school, campus, community, and city. Working together, family, friends, and professionals can encourage visually impaired individuals to a safe and independent exploration of their world.

# Roles and Responsibilities

# Roles and Responsibilities

The responsibility for providing orientation and mobility services to visually impaired students is a shared one. The importance of this joint responsibility is illustrated in the following statement from the Ministry:

> The (Special Education) Division . . . believes that the education of students is a shared responsibility between the Ministry of Education, Boards of School Trustees, and parents, with each holding primacy in some area of the child's education, while mutually sharing responsibility in other areas.[4]

Since most, if not all, visually impaired children are educated in a regular school setting, many school personnel (e.g., itinerant specialist/resource teachers of the visually impaired, special education teachers, regular classroom teachers, and teacher aides) will be expected to play important roles and to assume responsibilities in ensuring that visually impaired students derive maximum benefit from orientation and mobility instruction. The following pages outline the responsibilities of educational agencies and personnel, parents, and visually impaired students.

[4] Special Programs: A Manual of Policies, Procedures, and Guidelines (Rev. 1983), Section 3.3.

# *The Ministry of Education*

The Ministry of Education assumes responsibility for giving general direction toward the provision of orientation and mobility instruction as outlined in *Special Programs: A Manual of Policies, Procedures and Guidelines* (1983).

Under these policies, the Ministry of Education

- provides leadership to ensure that within available resources, orientation and mobility instruction and the appropriate support services are available to visually impaired students in the province;
- establishes standards and guidelines pertaining to the provision of orientation and mobility instruction (e.g., procedures, service delivery);
- allocates appropriate funds within available resources to assist school districts and personnel in the delivery of services;
- encourages school districts to provide high quality service by engaging orientation and mobility instructors with appropriate training and qualifications;
- assists and supports the professional development of school district personnel through orientation and mobility workshops and inservice training;
- monitors general progress and reviews the needs of orientation and mobility services on a district, regional, and provincial basis;
- monitors resources allocated and the effectiveness of their utilization.

# *The School District*

To ensure that visually impaired students receive appropriate orientation and mobility instruction, school districts should acquire the best professional and related support services available within the constraints of allocated resources.

In fulfilling its responsibilities, the school district

- utilizes designated funds for the provision of orientation and mobility instruction and related services;
- assists personnel at district and school levels in the planning, implementation, and evaluation of orientation and mobility services;
- allocates funds and facilitates the professional development of the staff involved;
- ensures that orientation and mobility services are provided by trained and qualified instructors.

# *The School Administrator*

It is the responsibility of the school administrator to plan, organize, implement, and evaluate the delivery of orientation and mobility services.

Within the constraints of available resources the school administrator

- encourages staff and students to participate and co-operate in instruction and activities designed to improve the orientation and mobility skills of visually impaired students;
- facilitates the programming and scheduling of direct instruction and the practice required to learn orientation and mobility skills;
- promotes awareness and understanding among students and staff concerning the orientation and mobility needs of visually impaired students;
- facilitates the professional development of the staff involved;
- establishes and maintains communication with parents concerning the needs and progress of visually impaired students.

# *The Orientation and Mobility Instructor*

The principal role of the orientation and mobility instructor is to teach orientation and mobility skills that develop the ability of visually impaired students to travel efficiently, safely, and effectively within their environments. The orientation and mobility instructor evaluates a student's mobility needs and implements an appropriate program of instruction. This process is articulated through the development of an Individual Service Plan (ISP) based on assessments, meetings, and consultations with school personnel, including the principal, itinerant specialist, regular classroom teacher, aide, parent(s), and student. The plan is contractual in nature and specifies the instructional responsibilities of all relevant persons.

Responsibilities of the orientation and mobility instructor may include

- assessment of student need and the development of an ISP;
- comprehensive training of the remaining senses (i.e., auditory, kinesthetic, olfactory, and cognitive), including concept development and the integration of spatial relationships for effective orientation within the environment;
- training of basic sighted guide techniques and cane techniques for mobility in familiar and unfamiliar environments, both indoors and outdoors;
- assisting with familiarization and orientation to school settings and surroundings;
- orientation and mobility training in residential, business, downtown, and rural areas, including the use of public transportation;
- enhancing the effective use of residual vision, including instruction in the use of prescribed low-vision distance aids (e.g., monoculars);
- evaluating a student's functional vision, both indoors and outdoors;
- consulting with professionals in the medical field and related areas (e.g., physiotherapy, occupational therapy, ophthalmology) in order to determine a student's limitations, as well as the modifications and adaptations required for appropriate programming;
- training of fine-motor and gross-motor skills in conjunction with the physical education specialist, if available;
- training in appropriate procedures when approaching the public for assistance, and in problem-solving techniques as they relate to orientation and mobility.

# *The Specialist (Itinerant/Resource) Teacher*

The specialist teacher plays an important role in orientation and mobility instruction within the public school system. Having in-depth knowledge of the visually impaired student resulting from frequent contact, the specialist teacher has a unique opportunity to be in constant communication with all those involved in the student's instructional program.

In consultation with an orientation and mobility instructor, responsibilities of the specialist teacher may include

- assessing the orientation and mobility needs of the student, using information gathered from the student, teachers, parents, and personal observation;
- compiling information concerning referrals for orientation and mobility instruction (see Appendix C, for sample information form);
- advising parents and appropriate school personnel of the orientation and mobility instructor's involvement;
- making suggestions to the orientation and mobility instructor concerning realistic expectations for the student;
- assuming responsibilities as stated in the student's Individualized Service Plan;
- acting as liaison between the orientation and mobility instructor, school personnel, parents, and student;
- providing inservice training, including orientation and mobility, to school personnel, parents, and regular classes;
- assisting the orientation and mobility instructor in the delivery of instruction and other related activities.

# *The Classroom Teacher*

The classroom teacher is of invaluable assistance to the orientation and mobility instructor when the student's instructional plan is being designed and implemented. Having a close association with the student, the classroom teacher has a unique opportunity to create an environment that will foster the visually impaired student's growing independence and encourage positive attitudes among classmates.

Responsibilities of the classroom teacher may include

- creating a classroom environment that gives the student accessibility to the door, bookshelves, and any needed equipment;
- ensuring that the student is oriented to the classroom, with the help of a specialist teacher or an orientation and mobility instructor, making modifications if necessary;
- assuming responsibilities as stated in the student's Individualized Service Plan;
- maintaining communication with the orientation and mobility instructor, specialist teacher, parents, and other personnel;
- encouraging students to participate in health and physical education programs;
- encouraging classmates to use appropriate techniques when assistance is required;
- encouraging the visually impaired student to use the orientation and mobility techniques previously learned.

# *The Parents*

The role parents play in orientation and mobility is one that is shared with many others: grandparents, siblings, uncles, and aunts. It is important that immediate and extended family members, who figure so largely in a child's development, work together so that no one person undoes the work of the team by adopting attitudes and practices of protectiveness. It is more beneficial to "show how" than to "do for" when the intent is to nurture an independent young adult.

The primary goal of parents is to help their visually impaired children adjust to their environments as well-rounded individuals. To achieve this goal the parent can

- provide the child with an atmosphere of encouragement and motivation;
- understand and become knowledgeable about the orientation and mobility needs of the child;
- encourage the visually impaired child to engage in independent experiences;
- work closely with professionals;
- meet with other parents of visually impaired children in order to share experiences and feelings;
- communicate the needs of the child and any other specific observations to the orientation and mobility instructor.

Parents wishing to use orientation and mobility techniques with their children might also consider

- making every effort to help the child develop the various senses (hearing, taste, smell, touch, sight) to the fullest, which is necessary if orientation and mobility techniques are to be effective;
- assisting the child to develop an awareness of body parts and encouraging him or her to use the body as a reference point for mobility and general orientation, remembering that a child's own body image is important to how he or she relates to the environment and moves within it;
- including verbal descriptions using basic orientation and mobility concept words in daily interaction (e.g., front, back, behind, forward, top, bottom, right, left, beside, along, east, west, north, south);
- assisting the child to identify with and orient to the environment that extends beyond the home and neighbourhood;

- including the child on trips and errands that will help build a fund of knowledge and experience about the environment and its expansiveness;
- providing verbal descriptions, including street names, geographical features, cardinal directions, and time/distance relationships, when walking or taking a trip in a vehicle (remembering to begin with the preschool child, although all meanings and concepts may not be understood);
- recognizing that orientation and mobility skills are best learned and practised in daily activities, such as shopping, walks to the park, and independent play.

## *The Visually Impaired Student*

The visually impaired student must assume certain responsibilities in order to maximize the benefits of orientation and mobility instruction. For example, it is important for young students to be aware of the purpose of instruction — to develop the ability to move with greater confidence and freedom within the environment. Student co-operation is essential and more likely to occur if the benefits of instruction are understood. In many instances, older students recognize the need for orientation and mobility and are motivated to achieve proficiency in this area. They generally know their accomplishments will give them greater independence, and as a result they are usually ready and willing to follow instructions and to practise the skills being taught.

Responsibilities of the visually impaired student include

- understanding the need for orientation and mobility instruction;
- co-operating with the instruction and practice;
- demonstrating a willingness to assume responsibilities as outlined in the Individualized Service Plan;
- demonstrating a willingness to communicate to parents, teachers, and fellow students concerning his or her needs.

# *The Canadian National Institute for the Blind*

The Canadian National Institute for the Blind acts as a direct service and information centre for visually impaired Canadians and professionals. The CNIB is one party in a total service system available to visually impaired children and their families. Very often, CNIB social service personnel and children's workers are among the first to offer support and counselling to visually impaired persons and their families.

The services of the Canadian National Institute for the Blind include

- provision of direct orientation and mobility services on a contractual basis to school-age children and youth;
- provision of workshops for professionals and visually impaired individuals;
- organization of children's group programs that promote the practice of orientation and mobility skills;
- supply of aids and equipment necessary for efficient orientation and mobility training;
- participation with interdisciplinary teams of specialists (e.g., Children's Hospital Visually Impaired Program Team) providing assessment and suggestions for home and school;
- home counselling and training for parents of visually impaired infants, including vision stimulation, sensory/motor activities, and concept development;
- referrals to other professionals as necessary;
- assistance to parents seeking appropriate resources available in the community;
- organization of parent support groups.

# *The Ministry of Human Resources*

The Infant Development Program funded by the Ministry of Human Resources serves children from birth to 3 years of age who show significant delay in development. Services are provided to children delayed in one skill area as well as to multi-handicapped children.

The services of the Ministry of Human Resources include

- home-based development programs for handicapped or delayed infants;
- regular assessments, support, and suggestions to encourage the development of physical, social, and intellectual skills in infants;
- workshops on child development;
- initiation of referrals to pediatricians, public health nurses, and other personnel when required;
- consultation with professionals and other staff personnel to determine appropriate programs for infants;
- a resource centre for special toys, equipment, books, and other supplies.

# *Other Support Personnel*

At different stages in a child's development, a wide variety of support personnel are available to provide direct and incidental service to the student. These persons may be drawn from the medical field, the school system, service agencies, and from various government levels. They may also include people from many diverse occupations within the private sector, including bus drivers, ophthalmologists, swim instructors, classroom aides, and janitors. Generally, their particular skills are called into play by direct service providers such as classroom teachers, teachers of the visually impaired, orientation and mobility instructors, and/or parents. Their unique talents can often assist in the development of orientation and mobility skills in different environments. The Children's Hospital Visually Impaired Program is an example of a support resource available to parents, teachers, and professionals.

Like all children, those who are visually impaired need to enjoy independent leisure time and the company of other children. It is helpful if support personnel are aware of this principle and avoid surrounding the visually impaired child with the overwhelming company of adults most of the time.

# The Visually Impaired Student

# The Visually Impaired Student

Visually impaired children must begin to use their remaining senses as early as possible in order to discover the world around them. Orientation and mobility techniques enable the children to explore what is beyond arm's length, incorporating what they feel, hear, smell, and see into a fuller concept of their environment. As they grow older, their environment becomes increasingly complex, calling for ongoing instruction based on individual changing needs.

In every phase of development visually impaired children are unique with regard to learning style, learning rate, and the acquisition of specific skills. It is therefore important to assess each child's needs and to plan accordingly. The orientation and mobility needs of low vision students will differ significantly from blind students. They will, for example, require ongoing instruction in the use of residual vision.

# *The Preschool Child*

Preparation for future orientation and mobility begins in infancy with caregivers assisting the child in the development of a strong personal body image and meaningful sensory experiences. For example, visually impaired infants must be taught to reach for objects in order to learn that there is a world beyond their bodies, and initially they will need some sound cues to enable them to reach this developmental milestone. Parents and workers may also need to model many of the infant's early required movements while engaging in body image, locomotor, and play activities. In these early stages, the infant needs to move or be moved from place to place in order to experience maximum exposure to all available sensory information in the environment.

The following suggestions may be useful. Caregivers considering early childhood development and orientation and mobility should

- begin body awareness activities, such as naming body parts and position in space;
- avoid overprotecting the child in his or her play environment;
- repeat activities with the child;
- teach the child to identify the presence of sound in the environment;
- encourage the visually impaired child early in life to experience both moving and stationary sound, making sure the child is able to recognize sound in relation to distance, direction, and intensity;
- encourage the child to categorize or classify sounds according to the rooms or areas in which they occur;
- orient the child to integral parts of family and social life, such as the appropriate methods of eating and the related social graces, both at home and when eating out;
- show the child at an early age how to distinguish between smells and tastes and to confirm carefully what they are;
- encourage the young visually impaired child to discover as much as possible about the attributes of any objects contacted, in order to develop concepts of shape, size, and texture in the environment;
- encourage the visually impaired child to use thermal cues, such as the sun, stoves, and heaters as aids to orientation;
- encourage the use of whatever residual vision the child has, in combination with appropriate orientation and mobility techniques;

- help the child to be aware of one's "personal space" (i.e., space around the stationary individual that is not intruded upon by others during interaction);

- monitor some of the child's movement to help increase awareness of the body in space, including some of the following keys to good orientation and mobility: proper posture, heel-to-toe walking, free motion of the arms while walking, and holding the head erect;

- help the child develop an awareness of pedestrian and vehicular traffic prior to attending school;

- help the child to be aware of street names, geographical features, cardinal directions, and time/distance relationships during trips and family outings. Even though the child may not grasp all of the concepts or understand the entire meaning of the information being imparted, this is invaluable preparation for future orientation and mobility techniques.

# *The Elementary School Student*

In order to function in the regular classroom setting, the young visually impaired child in elementary school must develop effective orientation and mobility skills. Independent, safe mobility involves the development of motor skills and the acquisition of basic concepts. These must be presented in a developmental, sequential manner in order to give the child the necessary prerequisite skills on which to build more complex orientation and mobility techniques.

As in all areas of learning, the child must have successful experiences, during both orientation and mobility instruction and independent travel. Day-to-day activities requiring independent orientation and mobility skills will help the student understand the need for these skills, and in turn will provide the motivation to participate in such activities. Each child will progress at his or her own rate, and each must be allowed time to become competent at each skill before going on to the next. Orientation and mobility instruction is an ongoing process; the skills a child learns during the early years will be used throughout the school years and adulthood.

Because visually impaired children are unable to observe and imitate the movements of those around them, they need to explore tactually any changes in the body position or movement of their instructors. It is also sometimes necessary to place a child's body in the correct position and lead him or her through the required movement.

Young visually impaired children must be given the freedom to move, to use newly acquired skills, and to develop increasing self-confidence as their world expands. The following list adapted from a 1970 paper compiled by the staff of the Colorado School for the Blind outlines many of the skills visually impaired children can acquire during the elementary years. A basic competency in these orientation and mobility techniques will provide elementary students with the prerequisites necessary for further training in secondary school.

Orientation and mobility skills training for visually impaired students in elementary school includes

- body image awareness;
- spatial and positional awareness;
- ability to organize the environment in a meaningful manner;
- awareness of body movements;
- development of the tactual sense using comparative size of people and objects, comparative weights and dimensions, states and qualities of materials, comparative temperatures, and comparative textures;

- integration of parts into a concept of the whole;
- development of the auditory sense through identification of environmental sounds, sound localization, movement of the body in relation to sound, auditory memory, and following directions;
- development of the olfactory sense in common places through the discrimination of odors as applicable to travel;
- development of the sense of taste;
- development of a sense of kinesthetic and proprioceptive movement;
- use of any residual vision through eye/hand co-ordination, discrimination of visual cues, use of low-vision aids, scanning techniques, and visual memory;
- use of systematic search techniques;
- use of correct turning techniques;
- understanding and use of cardinal directions;
- ability to recognize and use indoor features and textures (i.e., landmarks) to gather information about location and environment;
- ability to familiarize oneself to a room;
- identification of outdoor topography and textures;
- identification of specific weather features;
- knowledge of modes of travel;
- knowledge of approximate time and distance;
- identification of rates of movement;
- use of room and house numbering systems;
- identification of street patterns and layouts in school, residential, and downtown areas;
- identification and use of traffic signals;
- utilization of auditory, tactile, and modified maps;
- use of sequenced landmarks to maintain orientation;
- use of basic pre-cane skills (e.g., trailing, protective arm techniques, sighted guide techniques, landmarks and cues, direction taking, and squaring off);

- use of routes;
- ability to conduct oneself in a socially acceptable manner;
- use of basic cane techniques;
- travel in different locations (e.g., home, school, home neighbourhood, home to school, residential areas, business areas, shopping centres, inside stores and restaurants);
- use of public transportation.

# *The Junior and Senior Secondary School Student*

The needs of the visually impaired secondary school student are many. During this period, the student's academic and social environments are expanding, leading in turn to demands for greater independence. However, the social pressures experienced by the average high school student are more than normally threatening to students limited in independent travel experiences, and as a result these students often experience extreme social isolation. The ability to travel independently is thus integral to every phase of their personal and social development.

A visually impaired student's transition from childhood to adolescence can be greatly facilitated through the mastery of orientation and mobility skills. The literature in fact suggests that successful independent mobility is closely associated with good adjustment to visual disability, hence a positive self-concept.

The ongoing nature of orientation and mobility instruction cannot be emphasized enough. Because the needs of the student entering secondary school depend on previous orientation and mobility experience and psychological and maturational levels, as well as degree of visual loss, instruction must begin at the student's present level of functioning. For example, the secondary school student whose vision has been impaired relatively recently has vastly different orientation needs than the student who has been impaired since birth. Also, for the student with little previous orientation and mobility instruction this may involve developing an understanding of cardinal directions or learning a systematic search technique. For the more competent traveller, on the other hand, additional orientation and mobility instruction may help the student apply previously learned techniques to a variety of new situations. However, it must be remembered that wherever a student may be in this learning process, a certain competency in orientation and mobility techniques is needed before attempting more complex skills.

The orientation and mobility needs of secondary school students may include:

- extending the ability to use a cane in a variety of situations, both indoors and outdoors;
- extending the ability to use orientation skills (e.g., use of traffic sounds, cardinal directions);
- extending the ability to use orientation aids (e.g., tactual maps);
- continuing to develop the ability to familiarize themselves with new surroundings (e.g., a new school);

- demonstrating the ability to route travel to specific destinations (e.g., home-to-school, friends' homes, recreational facilities);
- continuing to develop familiarization with business and shopping areas;
- demonstrating the ability to travel in business areas;
- demonstrating the ability to execute complex street crossings and routes;
- demonstrating the ability to travel in rural areas;
- extending the ability to use public transportation, including rapid transit, ferry, seabus, taxi;
- demonstrating the ability to use problem-solving techniques and decision-making skills (e.g., What do you do if the bus driver lets you off at the wrong stop?);
- developing the appropriate procedures for obtaining information, such as bus schedules and airline reservations;
- reviewing appropriate ways to approach the public for assistance, or to refuse help;
- developing more efficient use of residual vision by increasing use of low-vision distance aids, both indoors (e.g., blackboard use) and outdoors (e.g., store signs, street signs, baseball games);
- demonstrating the ability to use shopping procedures;
- demonstrating the ability to travel in shopping malls;
- continuing to participate in physical education activities in school, with the needed adaptations of programs and equipment, and in recreational activities outside of school;
- demonstrating the ability to participate in social events requiring acceptable social skills, including effective orientation and mobility.

# The Post Secondary School Student

After a student finishes school, orientation and mobility techniques are used on a daily basis and have become part of everyday life. At this stage, the intensity and type of orientation and mobility instruction will depend upon various factors, such as previous skill training, vocational and academic goals, and individual need.

A person who has had a limited amount of skill training is likely to require more intense instruction in spatial concepts and orientation skills. For example, deficits in spatial concepts and cognitive development may necessitate additional route travel by rote in order to acquire the necessary "life skills," while difficulty in transferring skills may indicate that orientation and mobility instruction is needed each time a person relocates. Continued instruction may be required, as well, in order to familiarize young adults with a college campus or with modes of transportation from home to school and/or place of employment. Sudden changes in degree of visual loss may also necessitate extended training.

Because the visually impaired are often dependent upon family and friends for transportation within the community, their social life will determine to some extent the day-to-day use of orientation and mobility techniques. However, alternate methods such as electronic aids and guide dogs may be considered useful for various individuals.

# The Multi-handicapped Student

Visually impaired students with special needs require unique educational opportunities. These students do not represent a homogeneous group. Their additional handicaps may be any one of a variety of conditions, including cerebral palsy, epilepsy, hearing disorders, diabetes, mental retardation, hemiplegia, paraplegia, quadraplegia, orthopedic problems, and behavior disorders. As stated by noted American Program Specialist in Education Pauline Moore in *No Time to Lose:* "Their functioning levels can range from non-verbal to fluency of speech, from non-ambulatory to independent travel, from dependent to competent personal management. Further, their orientation and mobility capabilities could range from complete immobility to independent cane travel."[5]

The developmental motor skills and basic concepts learned by pre-school and school-age visually impaired children must also be acquired by multi-handicapped children. However, some special comments must be emphasized when considering the orientation and mobility instruction of multiply handicapped visually impaired children:

[5] Pauline M. Moore, *No Time to Lose: A Symposium* (New York: American Foundation for the Blind, 1968), n.p.

— The existence of additional handicaps necessitates the involvement of speech and auditory specialists, physiotherapists, occupational therapists, and many others. A team approach is vital to the success of any program designed for visually impaired children with special needs.

— Because of the compounding effect of more than one handicap, assessment of these special children is often difficult. A combination of handicaps can mask true ability and the multi-handicapped child's ability can be misjudged. Careful observation by all personnel involved is vital to this process, and referral to an orientation and mobility specialist for assessment and appropriate services is imperative.

Finally, two statements by noted practitioners in the field:

— "An effective method of communication must be found, be it verbal or through kinesthetic or other non-verbal means."[6]

— "The presence of even the most severe handicaps does not preclude the possibility for a child to learn, to develop, and to discover that life can be pleasurable and worth living."[7]

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[6] Pauline M. Moore, *No Time to Lose: A Symposium* (New York: American Foundation for the Blind, 1968), n.p.

[7] S. Rogow and M. Rodriques, *Their Special Needs: An Action Guide to Working With Blind Residents of Mental Retardation Facilities* (Toronto, Ont.: Ministry of Community and Social Services, 1977), n.p.

# Basic Orientation and Mobility Techniques

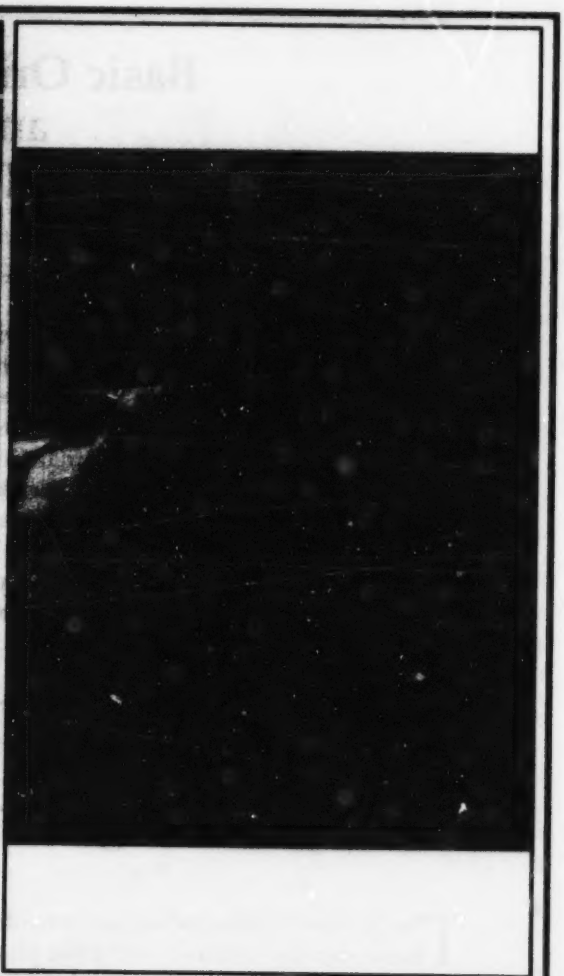
# Basic Orientation and Mobility Techniques

Information concerning the following basic orientation and mobility techniques is presented in order that caregivers and educators will have an opportunity to more knowledgeably intervene on the behalf of the visually impaired student. It is not intended as a comprehensive instruction manual, but rather a resource to be used in consultation with either the orientation and mobility instructor or the itinerant teacher of the visually impaired. As the student continues to utilize his or her skills between visits from the orientation and mobility instructor or specialist teacher, it is important that all involved in the student's development be able to offer assistance when required.

## *Sighted Guide*

The Sighted Guide Technique provides the visually impaired person with a basic method of travel using the physical assistance of a sighted individual. It is important that all those involved in a visually impaired student's life become familiar with this technique and use it in the correct manner. The following pages, excerpted from instruction material assembled by the Vancouver and Yukon Division of the Canadian National Institute for the Blind[8], illustrate six step-by-step aspects of the Sighted Guide Technique: Basic Technique; Taking a Seat; Stairs; Doorways; Narrow Passages; and About Face.

[8] *Sighted Guide Techniques* (Canadian National Institute for the Blind, Vancouver and Yukon Division) n.d., n.p. Reprinted with permission.



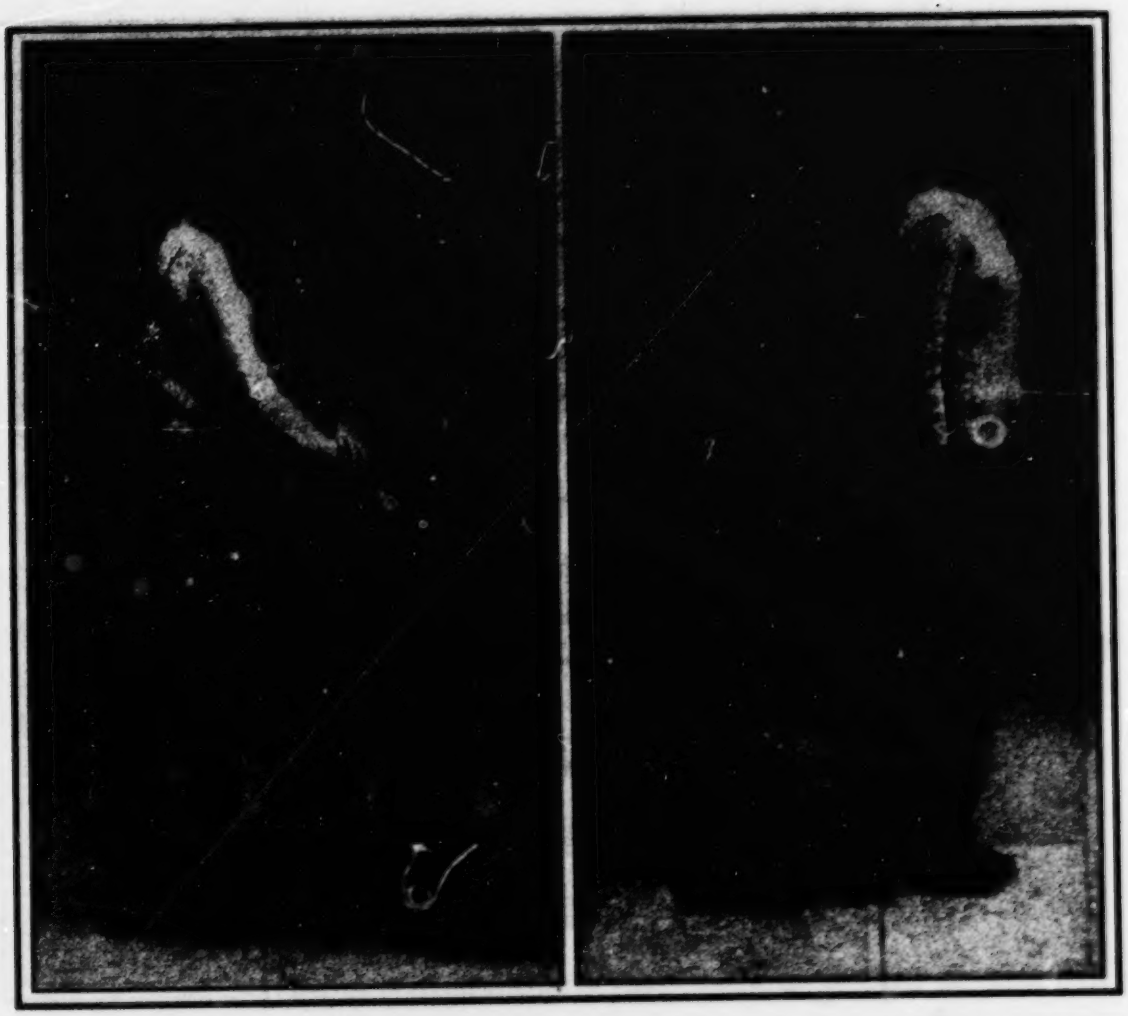
## BASIC TECHNIQUE

The blind person should always hold on to the sighted guide's arm (not vice versa). To eliminate groping, the guide should put out a hand or arm to make contact. The blind individual should then take the guide's arm just above the elbow (allowing free use of the guide's hands for carrying, opening doors), four fingers on the inside, thumb on the outside. (The motion of the guide's body can be easily felt and followed).

By flexing the elbow to approximately 90 degrees, the blind person will maintain a half-step distance behind the guide (allowing time to interpret and react to the guide's movements). To minimize body width and avoid moving beyond the protection of the guide, the blind person's arm should remain close to the body, with the shoulder directly behind the guide's opposite shoulder.

## MODIFIED SIGHTED GUIDE TECHNIQUE FOR YOUNG STUDENTS

The basic sighted guide technique can be modified for a young student by having the student hold onto the wrist of the guide. This allows the young student to learn the technique at an earlier age.

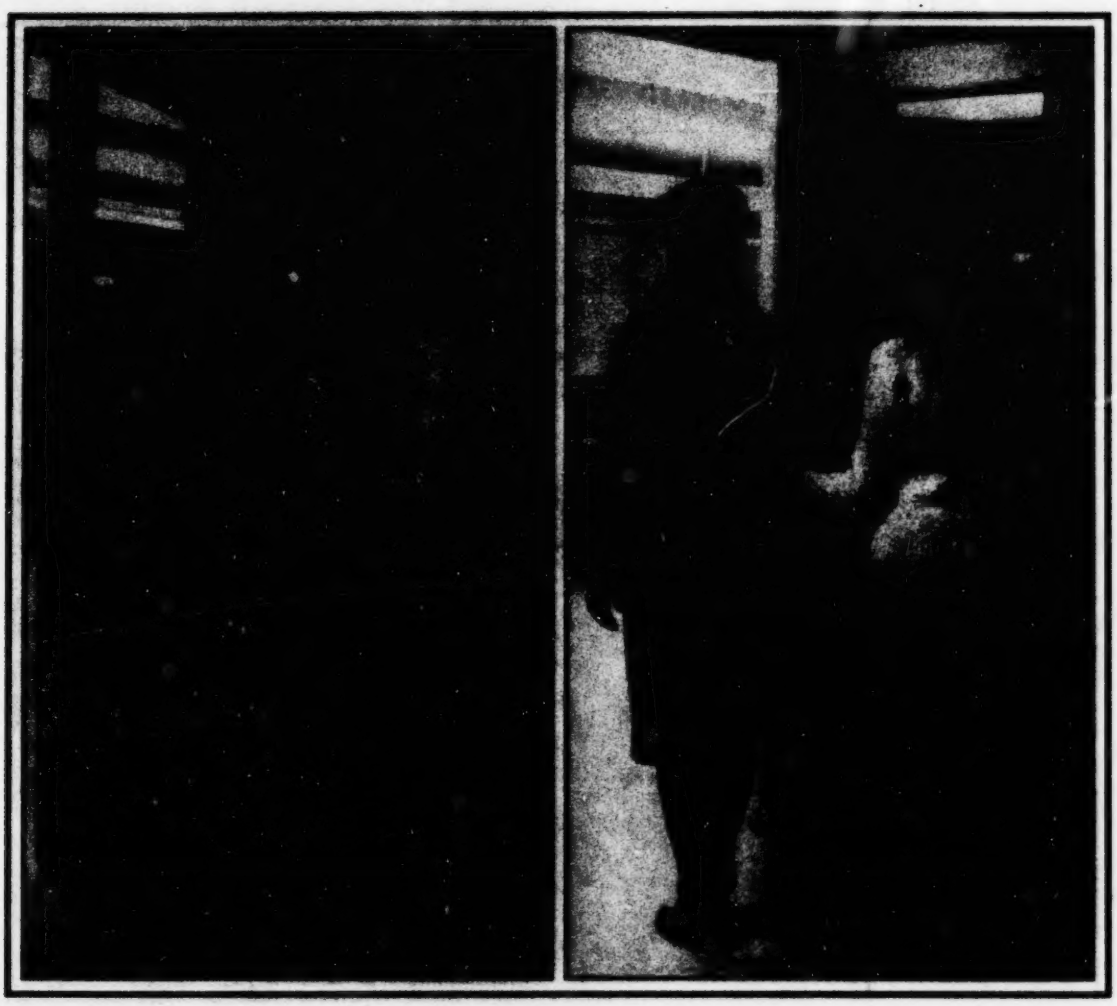


## TAKING A SEAT

The guide should lead the blind individual directly up to the chair, while providing a verbal exchange as to whether it is the back, front, or side, if it is an armchair or bench. By placing a hand on the back, it is possible for the blind person to become oriented to the chair. To sit squarely, the blind person can place the backs of the legs against the seat. Before sitting, it is also a good idea to make sure the seat is clear by sweeping a hand over and across the chair.

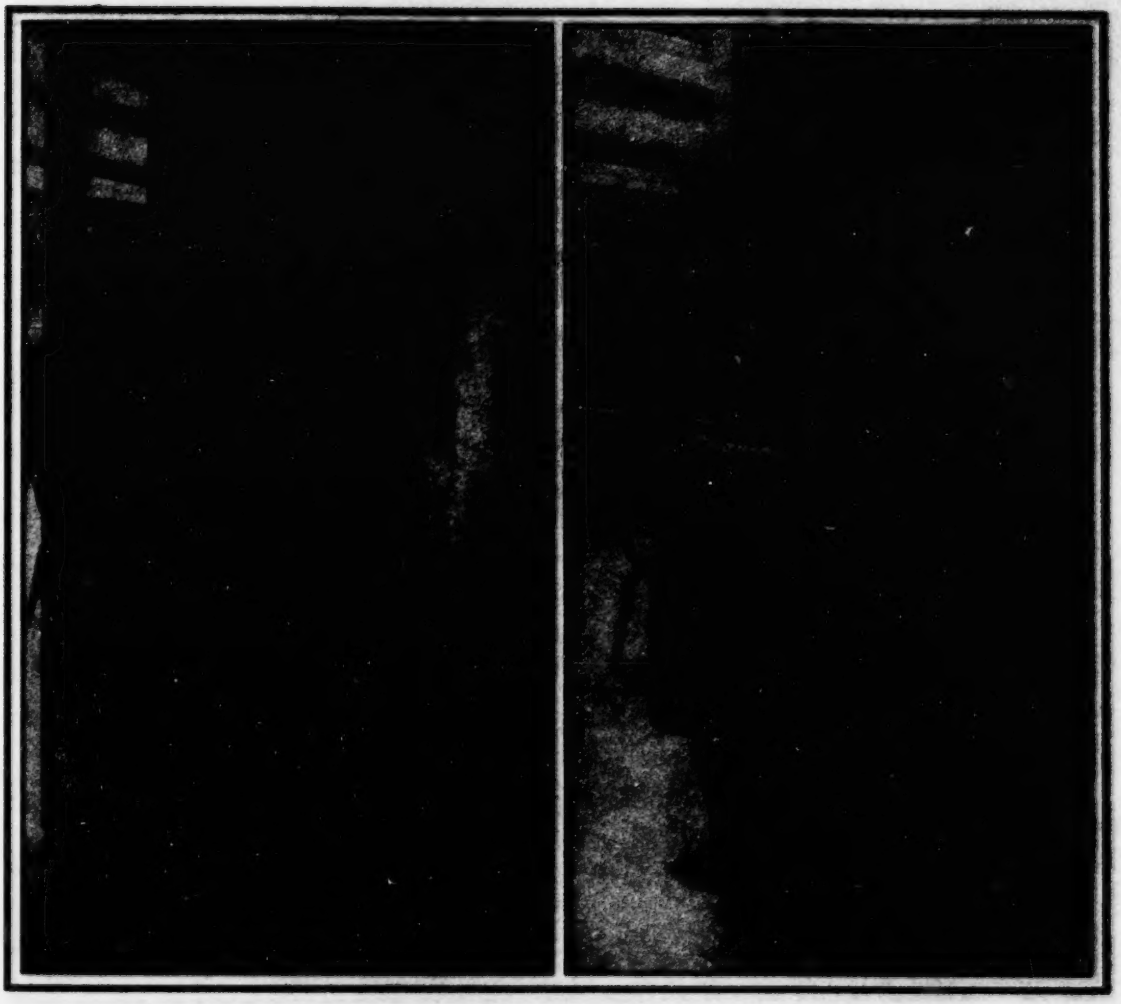
## STAIRS

The guide should offer a forewarning that they are about to go up or down a flight of stairs. The guide always approaches stairs squarely and pauses at the foot or head. The blind individual may or may not wish to switch to the side with the handrail. The blind person brings one foot forward to locate the first step, the guide steps up or down, and both proceed. As a cue that they have reached the bottom or top, the guide should pause again. For spiral staircases, the blind person is kept to the centre where stairs are their at most normal width. The process of pausing at tops and/or bottoms of stairways can be used effectively with street curbs as well.



## DOORWAYS

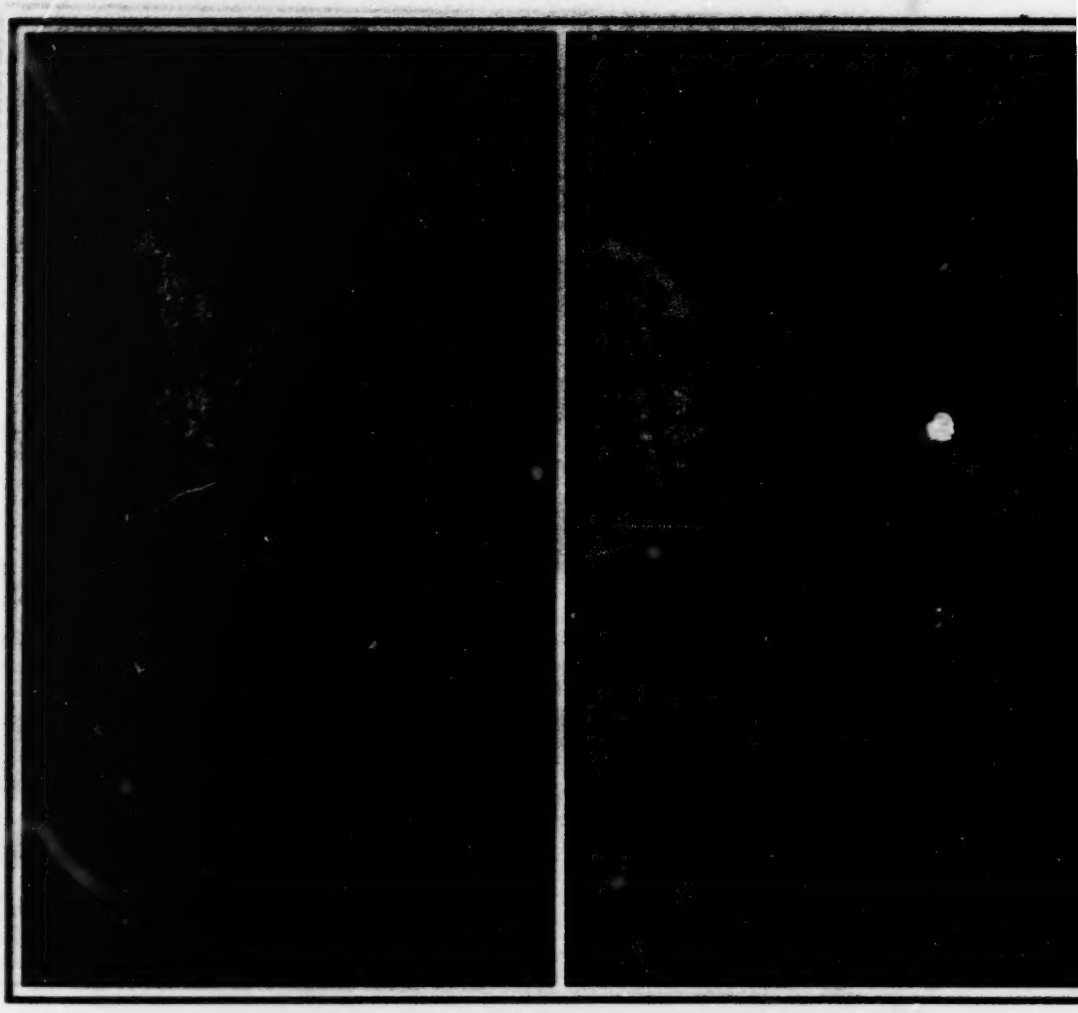
**Technique 1:** to be used if the door is located on the same side as the blind person's free hand. As the guide passes through the door, he or she provides information as to the whereabouts of the door (i.e., left or right). The blind individual then locates the door by sweeping a free arm from the midline until contact is made. The door is held open until clear.



# DOORWAYS

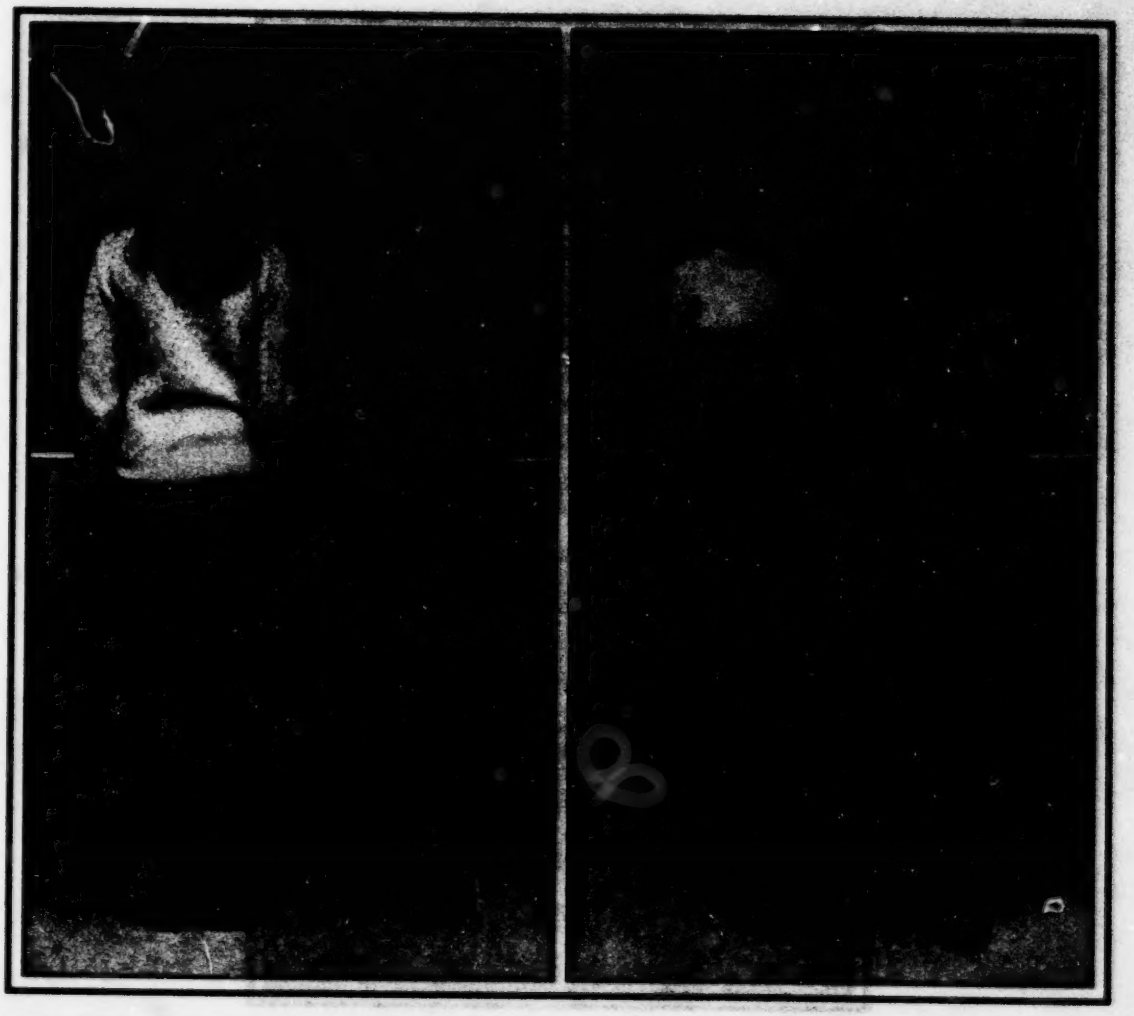
**Technique 2:** the procedure if the door is opposite the side with the free hand. The blind person should release the guide's arm and take hold of the same arm with the free hand, thus falling behind and in line. By straightening the arm, the blind person will fall a full step behind the guide (to avoid walking on the guide's heel). The free arm is used to locate and hold the door in the same manner as Technique 1 and, when clear, the normal position is resumed.

**An alternative to Technique 2:** Have the blind person shift from one side to the other in anticipation of doorways, then use the procedure as described in Technique 1.



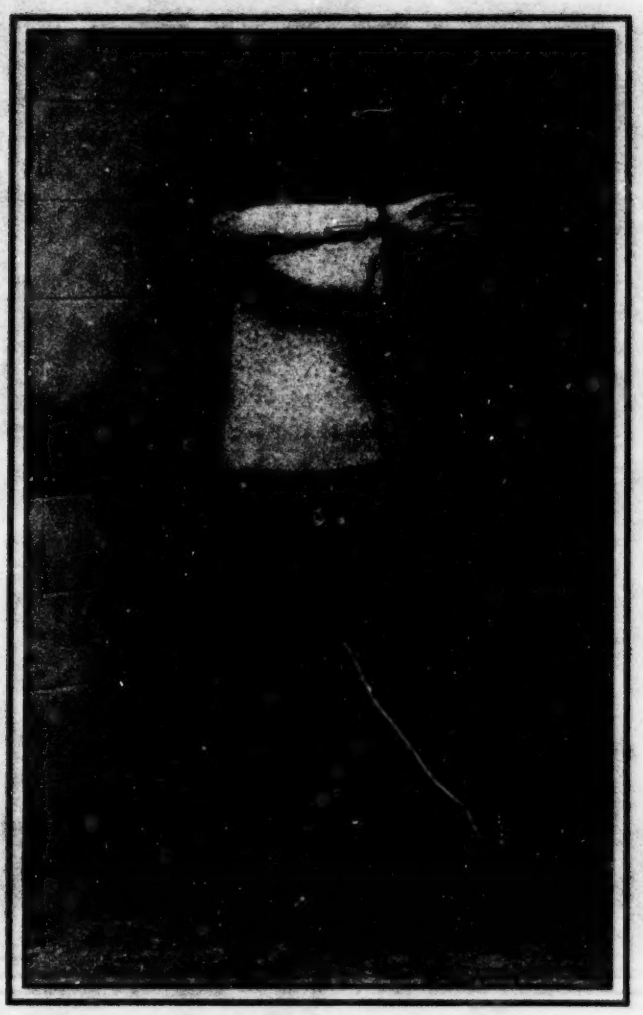
# NARROW PASSAGES

When there is insufficient space for two people to walk abreast (e.g., narrow aisles, doorways), the narrow passage technique is used. The guide signals a change in position by moving his arm backward and to the centre of his back. The correct response is to step behind the guide so that the two are in single file. To prevent stepping on the guide's heels, the blind person should straighten one arm, thus placing them a full step apart. After leaving the narrow passage, the guide signals by moving his arm back to his side, and the normal position is resumed.



## ABOUT FACE

This procedure can be used anytime a 180 degree turn is necessary (e.g., elevators, locked doors). The blind person should disengage his or her hand from the guide. Both parties then proceed to make a 180 degree turn independently. The guide makes contact with the opposite arm, and the normal position is resumed.

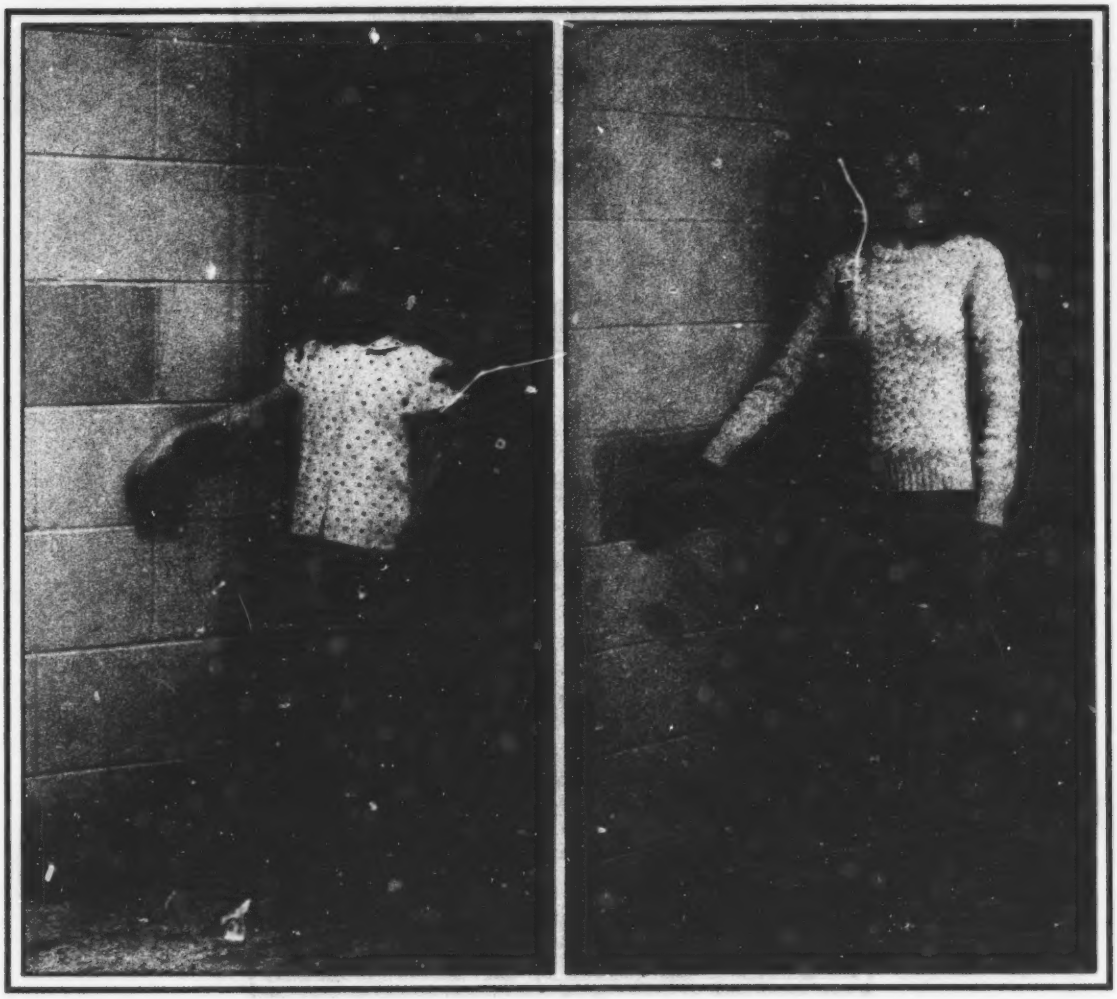


# PROTECTIVE ARM

**Upper Hand and Forearm:** Using this technique, the upper body is protected by placing the hand and forearm in a horizontal position in front of the body at shoulder height. The palm is forward and the fingers are extended, together, and relaxed. This technique may be employed in familiar or unfamiliar environments where the student anticipates head-high objects, (e.g., kitchen cupboard doors left ajar.). Outside, one might use it to protect the body from overhanging tree branches. This technique can be modified so that the forearm is moved toward the vertical to protect the face. Again the palm is forward and the fingers are extended, together, and relaxed.

# PROTECTIVE ARM

**Lower Body Protective Arm:** The lower body is protected from obstacles by positioning the arm diagonally across the body and trunk. The hand is approximately a foot in front of the body. The back of the hand is forward and the fingers are slightly flexed, together, and relaxed. Students can modify this technique somewhat by holding their book binders, gym bags, or purses diagonally across their lower bodies, allowing these hand-held objects to act as buffers.



## TRAILING

Trailing consists of using the back of the hand or fingers to lightly follow a surface such as a wall, fence line, or railing. The purposes of trailing are

- to establish and maintain a parallel line of direction;
- to locate particular objects;
- to determine positioning space relative to significant landmarks.

The student stands with the left or right shoulder perpendicular to the surface to be followed, extends the trailing arm out from the body at about 45 degrees, and proceeds, keeping the fingers slightly flexed to allow for a natural give when they come in contact with obstacles along the wall. Many students do not trail in environments they are familiar with. For students that do, the technique is used minimally in conjunction with other skills, such as echolocating objects, avoiding obstacles, or sensing time and distance.

# *Room Orientation*

Although there are different ways to explore a room or area, the key to a thorough and effective search is to do it systematically.

Choose a focal point from which the process may be initiated. A doorway works well, but the starting point could be any point in the room. From the doorway, have the student trail the perimeter of the room using whatever protective arm techniques are appropriate. At this time, the walls should be assigned cardinal direction names (e.g., north wall, south wall), feature names (e.g., window wall, blackboard wall), or a combination of both. How the room is positioned relative to hallways or streets is also useful information (e.g., The east or window wall is parallel to Main Street.).

After working back to the focal point along the perimeter, the inside of the room can be explored using whatever search pattern suits the student's purpose or seems appropriate for the layout of the room. This could include a parallel-line search, a grid-work search, or a diagonal-line search.

All aspects of the room should be discussed, paying particular attention to those areas or features that the student is responsible for, such as light switches, electrical outlets, coat hangers, and work stations. Pathways and aisles should be kept reasonably clear of clutter and overhead obstacles. If room furnishings are to be rearranged, the student should be made aware of this fact.

Although visually impaired students are often assigned to desks that are close to the door for easy exits and entrances, this is not a hard and fast rule. Students should have the opportunity to sit elsewhere when appropriate.

# *Cane Travel*

The cane is an effective and efficient mobility aid for safe, independent travel and is used by most visually impaired people. It provides visually impaired travellers with a means of lengthening their tactual sense in order to gain more information about their surroundings. When used properly, the cane provides protection from obstacles, feedback concerning the nature and condition of surfaces underfoot, and sufficient forewarning of drop-offs. It also serves to identify persons with visual impairment.

Learning to use a cane presupposes good orientation and mobility technique on the part of the user, and requires extensive training by an orientation and mobility instructor. The age at which the cane is introduced depends upon the individual's

- attitude and interest;
- balance and co-ordination;
- body awareness;
- need to learn the skill;
- maturity.

Instruction in the use of the cane can begin as early as elementary school.

As with other orientation and mobility techniques, cane skills are taught in a sequential, developmental manner. Once students have mastered a particular technique in a familiar environment, the same technique can be used in an unfamiliar and more challenging location. Students must also feel confident about their ability before proceeding to more difficult tasks.

# Programming for Instruction

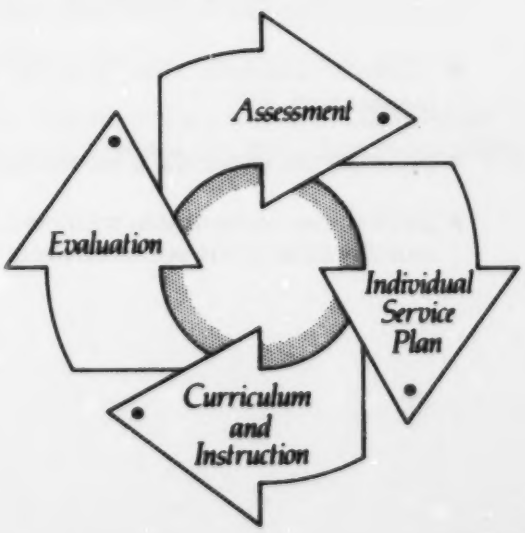
# Programming for Instruction

Just as provision for orientation and mobility instruction is a shared responsibility, so also is the programming for this instruction. All those involved, from the orientation and mobility instructor to the parents, provide information from their unique perspectives that is then used to design a comprehensive program. This program of instruction should meet the needs of individual students as they go through their daily routine. The skills they learn are essential in every area of their lives, from participating in a science experiment to cooking a meal at home. Every activity in which the student takes part involves orientation and mobility, and the student must be able to apply in many situations the skills he or she has learned. Programming must also ensure that skills are not learned in isolation, but rather as a part of everyday life.

Assessment for programming is primarily the responsibility of the orientation and mobility instructor, though the process requires, as well, the active participation of parents and school staff on a continual basis. Ongoing evaluation of student progress is essential.

# *Orientation and Mobility Model*

The following is a suggested model for an orientation and mobility program:



# *The Assessment*

The following steps outline a typical assessment process an orientation and mobility instructor might undertake when evaluating a student's need and formulating a program.

When beginning an assessment,

- inform involved school staff concerning what will be done and what it could lead to in terms of their program;
- obtain parents' informed consent;
- inform the student concerning the planned assessment and what it involves.

When locating an assessment setting, become familiar with

- the layout of the school;
- the student's daily routine.

When deciding what will be assessed, obtain information concerning

- the developmental level of the student;
- the student's present capabilities;
- parents' and school staff's desires for the student;
- the priorities of the student.

When deciding how long the assessment will take,

- choose an assessment tool, whether formal or informal, and become familiar with it;
- prioritize the essentials, if the assessment must be done in one session;
- break the assessment into sessions (i.e., conceptual, motoric, general mobility skills in the school environment) if more time is available.

# *The ISP (Individual Service Plan)*

When preparing the ISP,

- inform parents and staff in advance about what you will present at the ISP meeting;
- avoid jargon in your report; use language understood by those involved;
- determine whether those on the team support and understand your efforts;
- plan a tentative time-line for orientation and mobility instruction;
- be prepared with clear goals and objectives;
- determine team members' responsibilities in carrying out the ISP.

# *Curriculum and Instruction*

When developing curriculum and instruction plans,

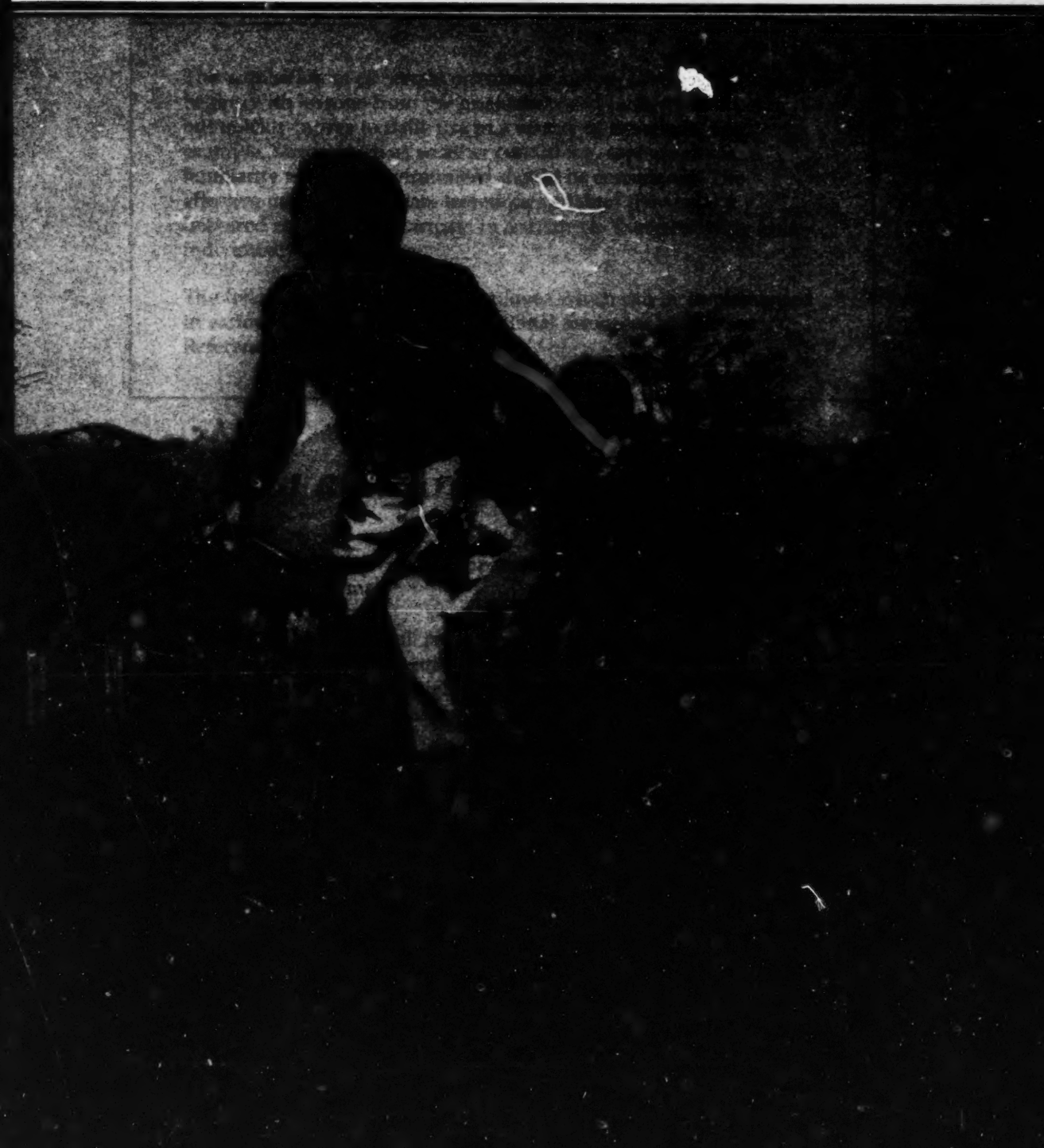
- refer to ISP statements as an outline;
- establish long-range goals and short-term objectives;
- include goals to meet both conceptual and developmental needs, keeping the immediate needs of the student the priority;
- share lesson plans with significant staff members and with parents;
- discuss lesson plans with the student, making sure the tasks involved are understood, and that the student is aware of his or her responsibility in the program.

# *Evaluation*

When considering the evaluation,

- keep records of sessions completed, using the most efficient format (e.g., checklists, anecdotes);
- keep involved school staff and parents informed of the progress made, and of new skills the student has learned and should be using;
- give the student the necessary feedback in order to promote a positive attitude toward independent travel;
- arrange team meetings to review progress and goals and, if necessary, to revise the plan;
- ensure that the student is competent with and confident about the skills learned before proceeding to more complex techniques.

# Orientation and Mobility in Various Environments



# Orientation and Mobility in Various Environments

The acquisition of all formal orientation and mobility techniques begins with lessons from the orientation and mobility instructor, but quickly moves to daily use in a variety of situations. For example, factors such as weather conditions, topography, and familiarity with the environment should be considered. The effective use of appropriate techniques enables the visually impaired student to participate in activities as independently as is individually possible.

The following pages outline techniques which can be implemented in various environments. For additional resources, please see References Section.

## *In and Around the Home*

To effectively assist the visually impaired student in the home environment, parents and others may

- orient the student to all rooms in the house, to the yard, and to the neighborhood, and identify landmarks to aid efficient travel, keeping in mind that the student might also choose to use a sighted guide when travelling in the community;
- suggest that the student trail a wall to locate a specific object, such as a gate in the fence or a laundry chute; or that he or she might use a cane to aid independent travel in the yard, neighborhood, or community;
- modify orientation and mobility techniques when travelling in rural areas;
- use protective arm techniques if necessary when travelling outside and in unfamiliar areas. If the student is familiar with the layout inside the home, and if nothing has been changed without his or her knowledge, these techniques may not be needed when the student is travelling alone.

# *In the School*

In the school, teachers and other personnel working with the student should be aware that

- the student needs to become oriented to the classroom and school, beginning with the washroom, office, gym, library, and including any other rooms the student will be using;
- the student needs to become familiar with fire-drill routes;
- the student needs to become familiar with the number system of the school;
- the student may choose to use a sighted guide when travelling in unfamiliar environments, in crowded hallways, or simply to expedite travel;
- the student may trail a wall when seeking a specific location (e.g., the art room, the water fountain);
- the student may find that the various protective arm techniques will help to ensure safe travel when travelling alone in poorly lit areas or in unfamiliar surroundings. These techniques can be used in conjunction with trailing or a cane;
- the student may be able to use a cane to aid independent travel in and around the school.

# *In Public Places*

It is important that visually impaired individuals be included in family and school outings to theatres, museums, libraries, restaurants, and other public places. It is everyone's responsibility to ensure that they have the orienting information they need to develop a strong concept base for travel.

Enroute, the student should be made aware of street names, cardinal directions, time, and distances travelled. Of course, all information concerning the route need not be shared on a first visit. However, it must be remembered that sighted travellers are constantly assimilating incidental information along the routes travelled, and if this information is to be shared with the visually impaired student — and if it is to be learned well over time — it must be presented in a structured fashion with many opportunities for review.

Each public place may present orientation and mobility problems specific to the locale. The way these are dealt with will depend on the age and the skill

level of the student. Questions about these issues can be answered by the orientation and mobility instructor or the itinerant teacher.

# *Using Modes of Transportation*

It is important that visually impaired travellers be aware of and experience all modes of transportation. For example, many young children are not sure what a bus, plane, or train actually looks like, while older students may not know how to plan a trip, such as organizing transportation and hotel accommodations.

To help the student develop travel skills,

- visit a local bus station or terminal, and describe the size of the bus, the outside and, if possible, the inside (e.g., Where does the bus driver sit? How many doors are there in the front, the back?);
- have a student phone the information office for a particular bus route or schedule, and plan a short trip with the student to a nearby destination, keeping in mind that independent travel may require the service of a mobility instructor;
- visit an airport for an experience in sights and sounds, even if it is not possible to go inside an airplane;
- include the student in the planning of a project; have the student plan a hypothetical trip (e.g., high school students may enjoy being responsible for plane schedules, hotel reservations);
- discuss the function of taxis and plan a short trip with the student, keeping in mind that he or she may need to practise giving directions to a taxi driver, or to role-play the procedure and conversation at home.

# *Outdoor Experiences*

Many visually impaired students possess deficiencies in their awareness of the outdoor environment. For some, it is such a problem that they never become familiar enough with the natural environment to be able to interact effectively.

The answer lies in supplying the visually impaired person with meaningful experiences, keeping in mind that *experience*, not a person, teaches concepts. Remember, too, that participants consider these activities *recreation*, not prepared learning environments. For example, a nature trail can enable a student to interact with the environment, move in space, manipulate objects, and search with the senses. It is through these active experiences — through assimilation and accommodation of the stimuli in the environment — that concepts will be built.

To develop outdoor skills, students should be encouraged to

- share in activities such as erecting a tent, describing the size of the tent (its front and back);
- help navigate a boat, pointing out directions, the position of the sun and wind, and sharing in the rowing (more pull on the left, right);
- experience the outdoors by touching various trees, smelling fragrant flowers, listening to a waterfall or river.

# Glossary

| | |
|---|---|
| **Alley/Back Lane** | a service road usually found behind home or business areas of cities |
| **Arc** | the pattern made by the cane tip when touch technique is used |
| **Auditory** | related to or experienced through the sense of hearing |
| **Block** | an area often immediately bordered by four streets; the distance between two streets |
| **Body Image** | a mental picture or conception of the physical parts of a person and their relationships to each other |
| **Boulevard** | the area between a sidewalk and a parallel street; a broad, often landscaped thoroughfare; a landscaped area between two sides of a street |
| **Cardinal Directions** | directions denoting north, south, east, west; compass directions |
| **Clearing** | the process of confirming the safety of an area either with a sweep of the cane tip on the ground or a sweep of the hand on a surface |
| **Clue** | any sound, odor, temperature, tactile stimulus, or visual stimulus affecting the senses that can be readily converted when determining one's position or line of direction |
| **Crossing** | the process of moving from one corner of an intersection to another, or from one side of an object to the opposite side |
| **Cue** | any sound, odor, temperature, tactile stimulus, or visual stimulus affecting the senses that will elicit an immediate or automatic response |
| **Direction** | a series of points in one's environment set according to a generalized rule and along which one may move or be aimed to move along |
| **Directionality** | the projecting of all directions from the body and out into space — right and left, up and down, fore and aft. (Students must have a sense of laterality before they will be able to project these directional concepts into external space) |

| | |
|---|---|
| **Direction Taking** | the act of getting a line of direction from an object or sound to facilitate travelling in a straight line towards an objective |
| **Dominant Clue** | of the many clues that are present, the one that best fulfills all informational needs at that moment |
| **Drop Off** | an assigned route in which the student is disoriented and then allowed to reorient himself or herself in order to locate a designated objective; any sharp decline |
| **Echolocate** | recognizing changes in the environment as a result of sound waves deflected from surfaces |
| **Environmental Awareness** | being alert to the clues and cues to be found in an area or situation; the selective association of existing pertinent information |
| **Familiarization** | the process of learning placement, arrangement, and relationships within an area |
| **Gait** | a manner or rate of walking |
| **Guideline/Shoreline** | (see Shoreline) |
| **Imbalanced Arc** | the pattern created when the arc of the cane tip is wider on one side of midline than on the other |
| **Individual Service Plan (ISP)** | a plan with an outline of the primary and secondary objectives for orientation and mobility instruction designed to meet the specific needs of the student; contractual in nature, specifying the responsibilities of all relevant persons — the orientation and mobility instructor, the specialist teacher of the visually impaired, the regular classroom teacher, parents, administrators and, whenever appropriate, the student |
| **Intersection** | a place where two or more streets meet and/or cross |
| **Inverted Arc** | the pattern made when the tip of the cane makes contact with the ground at any point other than in front of the feet or at the end points |
| **Irregular Intersection** | any intersection that does not contain the standard four 90-degree angles formed by two streets and the crossing |
| **Kinesthetic Sense** | knowledge of the movement and position of the body; sensory experience derived from human movement |
| **Landmark** | any familiar object, sound, odor, temperature, or tactual clue that is easily recognized and has a known location in the environment |

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| **Laterality** | internalized awareness of (a) the difference between right and left; and (b) how far right and how far left various activities are centred; the ability to control the two sides of the body together or separately; the motor basis for spatial concepts |
| **Line of Direction** | the course along which a person is aimed to move |
| **Line of Travel** | the course along which a person is moving |
| **Low/Residual Vision** | usable vision ranging from light perception to object perception that would be sufficient to enable the individual to discriminate and recognize visually suitable materials |
| **Low-vision Aids** | optical aids, usually providing magnification for individuals with low vision (e.g., monoculars, reading lenses) |
| **Masking Sound** | a blocking or distorting sound |
| **Midline** | an imaginary vertical line that would divide the body equally into right and left sides when standing |
| **Mobility** | the capacity, the readiness, and the facility to move; the ability to move within one's environment |
| **Modified Hand and Forearm** | the positioning of the hand and forearm in a horizontal position in front of the body at about waist height, six to eight inches away from the body, with the palm forward, and the fingers extended, together, and relaxed |
| **Navigation** | the art or practice of getting about; the act of evaluating known facts in order to facilitate efficient movement or mobility |
| **Numbering Systems** | the way and patterning of streets and addresses within a city or area |
| **Object Perception** | the ability to perceive the location of objects by sound |
| **Olfactory** | relating to or experienced through the sense of smell |
| **Orientation** | the process of utilizing the remaining senses in establishing one's position and relationship to all other significant objects in one's environment; collection and organization of information concerning the environment and one's relationship to it |
| **Partially Sighted** | having a visual acuity or 20/70 or less in the better eye after best possible correction, and being able to use |

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| | residual vision as the principal channel of learning; a person who is at least able to count fingers |
| **Path of Preference** | those paths beaten down by pedestrians, bicycles, etc., that do not conform to the acceptable urban geometry, but offer more convenient approaches from point A to point B |
| **Point of Reference** | a determined fixed point within an environment that is used in relation to or connection with other points within the same environment |
| **Proprioceptive Movement** | movement of the body brought about by impulses arising within the body from muscles, tendons, joints, and the labyrinth of the inner ear, which are then conveyed to the central nervous system |
| **Protective Arm Technique** | upper body: the positioning of the hand and forearm in a horizontal position in front of the body at shoulder height, the palm forward and the fingers extended, together, and relaxed<br>lower body: the positioning of the arm diagonally across the body and trunk, with the hand about one foot in front of the body, the back of the hand forward, and the fingers slightly flexed, together, and relaxed |
| **Pre-cane Skills** | those skills or techniques taught prior to instruction in the use of the cane |
| **Recovery** | the process of reorienting oneself to the desired position; the process of regaining proper orientation in the environment |
| **Residual Vision** | one's remaining vision |
| **Route Travel** | travel along a predetermined route |
| **Run** | a course or route mapped out and followed to a given point or objective |
| **Safety Island** | an area (usually raised) within a roadway from which traffic is excluded |
| **Scanning Techniques** | use of the senses to systematically search the environment |
| **Search Pattern** | a systematic approach to locating or determining the position of an object or landmark |
| **Selectivity** | the ability to choose those techniques or clues that will facilitate a desired end |

| | |
|---|---|
| **Self-familiarization** | the ability to acquaint oneself with a new environment in a systematic fashion |
| **Sensory Training** | learning to utilize the remaining senses to the optimum |
| **Shoreline** | the border or edge of a sidewalk or grassline |
| **Sighted Guide Technique** | method enabling a visually impaired person to travel safely and efficiently in the company of a sighted person |
| **Sound Differentiation** | the ability to distinguish between different useful sounds |
| **Sound Localization** | to determine the exact bearing or line of direction of the source of a sound |
| **Squaring Off** | the act of aligning and positioning one's body in relation to an object for the purpose of getting a line of direction (usually perpendicular to the object) and establishing a definite position in the environment |
| **Systematic Search Techniques** | methods employed by a visually impaired person when attempting to locate objects in a systematic manner |
| **Tactile/Tactual** | related to or experienced through the sense of touch |
| **Trailing** | the act of using the fingers to follow a surface for any or all of the following reasons: to determine one's position in space; to locate a specific objective; to establish a parallel line of travel |
| **Upper Hand and Forearm** | the positioning of the hand and forearm in a horizontal position in front of the body at shoulder height, with the palm forward and the fingers extended, together, and relaxed |
| **Upper Modified Hand and Forearm** | the positioning of the hand and forearm in a vertical position in front of the face, with the palm rotated forward, and the fingers extended, together, and relaxed |
| **Veering** | a change in direction or course; drifting away from the desired line of travel |

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# APPENDIX A

Province of British Columbia
Ministry of Education

**Ministry Information Circular** 19 | 83.10.00

**ORIENTATION AND MOBILITY INSTRUCTION FOR VISUALLY IMPAIRED STUDENTS**

OCTOBER, 1983 ISSN 0823 0714

DISTRIBUTION:

Ministry Management Committee
District Superintendents of Schools
Superintendents of Schools
Secretary-Treasurers
All Schools - (Public and Independent)
Indian Day Schools

BCTF, BCSTA, FISA, BC Faculties of Education

For the fiscal year 1983-84, the Ministry of Education will continue to fund the orientation and mobility instruction program to eligible visually impaired students in school districts of the Province in accordance with School Department Circular No. R59 dated 80.09.04.

To obtain the services, school districts should follow the procedures outlined in the above circular. Copies of the revised Orientation and Mobility Forms A & B (SPE/OMA & SPB/MOB) are attached in this circular. The completed forms should be returned not later than October 30, 1983 to:

Provincial Coordinator
Programs for Visually Impaired
Special Education Services Branch
Division of Special Education
Ministry of Education
7451 Elmbridge Way
Richmond, B.C.
V6X 1B8

The above services are being provided through funds from the Ministry of Education under a contract with the Canadian National Institute for the Blind, B.C. & Yukon Division. This contract will expire on March 31, 1984. After this date, school districts will be expected to obtain services directly from the Canadian National Institute for the Blind or from available qualified orientation and mobility instructors.

....2

Funding to support the orientation and mobility services element of a program for the visually impaired has been built into the new Financial Management System announced by the Minister of Education on July 12, 1983. Service levels designed under this system include the financial resources necessary to provide this element of the program for visually impaired students.

The Ministry of Education, through the office of the Provincial Coordinator, Programs for Visually Impaired, of the Division of Special Education will be pleased to assist school districts in the acquisition of the required orientation and mobility instruction either through CNIB or available qualified instructors. Guidelines for the provision of orientation and mobility services by school districts will be included in the Special Programs Manual being revised.

Your assistance in bringing this circular to the immediate attention of all school principals and personnel involved with programs for visually impaired students will be appreciated.

For further information, please contact Edward Y.P. Lau, Provincial Coordinator, Programs for Visually Impaired, at the above address. The telephone number is 278-3433.

EYPL/ck
Attachments (2)

# APPENDIX B

SAMPLE

ORIENTATION AND MOBILITY INSTRUCTION

INDIVIDUAL SERVICE PLAN

FOR

Mary Smith

The following service plan was drawn up after the K-12 orientation and mobility program was reviewed with Mr. and Mrs. Smith; Mrs. Jones, the itinerant teacher; and the O & M instructor who is the present writer. The plan is based on consultation with Mrs. Jones and the parents. A talk with Mary and the orientation and mobility assessment in both the home and school area contributed to the proposed plan of action. The plan is contractual in nature with the responsibility of the participants outlined as follows:

1. To aid in developing confidence and an increased awareness of information received from the cane, the initial program includes:

   - upper and lower hand protective techniques
   - concept development ... street patterns
     ... traffic flow
     ... landmarks and their placement
   - diagonal cane technique
   - route travel with directions
   - route travel with directions and the use of landmarks.

   Lessons will take place twice a week, the program running for seven weeks duration. After seven weeks another assessment will occur and recommendations for future O & M development suggested.

2. Mr. and Mrs. Smith have indicated that they will assist the program by providing two reinforcement lessons per week. A meeting will be held with the writer once a week at which time lesson activities will be reviewed and further activities suggested.

3. Mary will be required to try and employ her mobility skills, and to ask questions about mobility situations that confront her.

4. The itinerant teacher, Mrs. Jones, has agreed to act as a liaison person responsible for keeping parents and school personnel informed of ongoing activities.

# APPENDIX C

**CONFIDENTIAL**

**MINISTRY OF EDUCATION—SPECIAL EDUCATION DIVISION**

**ORIENTATION & MOBILITY INSTRUCTION PROGRAM—FORM B**

**INFORMATION REGARDING STUDENT**

(See reverse side of this form for Instructions)

Yr Mo Day

NAME OF STUDENT: _____ DATE OF BIRTH: _____

SCHOOL ATTENDED: _____

GRADE: _____

PROGRAM TYPE: ☐ Regular Class ☐ Special Class
☐ Resource Room ☐ Special School
☐ Others (Please specify): _____

PARENT/GUARDIAN: _____

HOME ADDRESS: _____ TELEPHONE: _____

**A. GENERAL**

DEGREE OF VISION (Check one only):

**Low Vision:** ☐ Moderate ☐ Severe ☐ Profound

**Blind:** ☐ Light Perception ☐ Light Projection ☐ Totally Blind

LIST OPTICAL AIDES (e.g. glasses, monocular) USED: _____

BASIC ORIENTATION SKILLS (Check one only):

☐ Good ☐ Fair ☐ Poor

Comments: _____

BASIC MOBILITY SKILLS (Check one only):

☐ Pre-cane ☐ Uses cane

Comments: _____

STATUS (Check one or more):

☐ New referral ☐ Has received instruction before

☐ Transfer to new school:

☐ from kindergarten to elementary

☐ from elementary to secondary

☐ Family move to new location

FAMILY INVOLVEMENT (Check one only):

☐ Available ☐ Not available

B. OTHER PHYSICAL DISABILITIES (if any): _____

_____

_____

C. DESCRIPTION OF STUDENT'S SPECIAL NEEDS: _____

_____

_____

D. RECOMMENDATIONS: _____

_____

_____

Signature: _____

Name of Teacher: _____

Position: Itinerant/Resource/Regular Class Teacher/Orientation & Mobility Instructor

Telephone No.: _____

School District No.: _____

_____

INSTRUCTIONS FOR COMPLETING FORM B:

1. All sections must be completed.
2. To check items under Degree of Vision use Dr. Natalie Barraga's scale.
3. Basic orientation skills refer to student's general ability in body awareness, spatial concepts and body position in relation to physical environment, e.g. laterality, directionality, distance, etc.

SPB/OMB

POOR

QUALITY

ORIGINAL